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Application No.	10/668,798
Filing Date	September 23, 2003
First Named Inventor	Soon Ho Lee
Art Unit	2632
Examiner Name	Travis R. Hunnings
Total Number of Pages in This Submission	22
Attorney Docket Number	51876P395

ENCLOSURES *(check all that apply)*

- [X] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment / Response
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
  - [ ] PTO/SB/08
- [ ] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
  - [ ] Basic Filing Fee
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  - [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert a Provisional Application
- [ ] Power of Attorney, Revocation Change of Correspondence Address
- [ ] Terminal Disclaimer
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- [ ] CD, Number of CD(s)
- [ ] After Allowance Communication to Group
- [X] Appeal Communication to Board of Appeals and Interferences
- [ ] Appeal Communication to Group **(Appeal Notice, Brief, Reply Brief)**
- [ ] Proprietary Information
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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Eric S. Hyman, Reg. No. 30,139 BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP
Signature	
Date	November 28, 2005

CERTIFICATE OF MAILING/TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Typed or printed name	**Erin Flynn**		
Signature	Erin Flynn	Date	**November 28, 2005**

FEE TRANSMITTAL for FY 2005

Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27.

TOTAL AMOUNT OF PAYMENT	($)	500.00

Complete if Known	
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METHOD OF PAYMENT *(check all that apply)*

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☒ Deposit Account Deposit Account Number: 02-2666 Deposit Account Name: Blakely, Sokoloff, Taylor & Zafman LLP

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

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FEE CALCULATION

1. EXTRA CLAIM FEES

			Extra Claims		Fee from below		Fee Paid
Total Claims	7	- 20** =	0	X	50.00	=	$0.00
Independent Claims	1	- 4** =	0	X	200.00	=	$0.00
Multiple Dependent						=	

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
1202	50	2202	25	Claims in excess of 20
1201	200	2201	100	Independent claims in excess of 3
1203	360	2203	180	Multiple Dependent claim, if not paid
1204	300	2204	150	**Reissue independent claims over original patent
1205	300	2205	150	**Reissue claims in excess of 20 and over original patent

**or number previously paid, if greater, For Reissues, see below

SUBTOTAL (1) ($) 0.00

2. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet.	
2053	130	2053	130	Non-English specification	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1,020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1,080	Extension for reply within fifth month	
1401	500	2401	250	Notice of Appeal	
1402	500	2402	250	Filing a brief in support of an appeal	500.00
1403	1,000	2403	500	Request for oral hearing	
1451	1,510	2451	1,510	Petition to institute a public use proceeding	
1460	130	2460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
1809	790	1809	395	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	790	2810	395	For each additional invention to be examined (37 CFR § 1.129(b))	
Other fee (specify)					

SUBTOTAL (2) ($) 500.00

SUBMITTED BY

Complete (if applicable)

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Signature				Date	11/28/05

Based on PTO/SB/17 (12-04) as modified by Blakely, Sokoloff, Taylor & Zafman (wlr) 12/13/2004.
SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Docket No.: 051876P395

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Soon Ho Lee

Application No.: 10/668,798

Filed: September 23, 2003

For: **METHOD FOR PROVIDING BUS ARRIVAL TIME FOR PASSENGERS BY USING DSRC**

Art Group: 2632

Examiner: Travis R. Hunnings

Assistant Commissioner for Patents
Board of Patent Appeals and Interferences
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Pursuant to 37 C.F.R. § 41.37, Appellant submits the following Appeal Brief for consideration by the Board of Patent Appeals and Interferences ("Board"). Applicant also submits herewith a check in the amount of $500.00 to cover the cost of filing this brief, as set forth in 37 C.F.R. § 41.20(b)(2). Please charge any additional amounts due or credit any overpayment to Deposit Account No. 02-2666.

TABLE OF CONTENTS

I. REAL PARTY IN INTEREST

Soon Ho Lee, the party named in the caption, transferred his rights in that which is disclosed in the subject application through an assignment recorded on January 21, 2004 to KT Corporation, a Korean corporation. Accordingly, KT Corporation is the real party in interest.

II. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in this Appeal.

III. STATUS OF CLAIMS

Claims 1, 4, 5, and 11-14 are pending in the application, all of which have been rejected. Appellant appeals the rejection of Claims 1, 4, 5, and 11-14.

IV. STATUS OF AMENDMENTS

No amendment has been submitted after the Final Office Action mailed June 29, 2005.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The embodiments of the invention relate to a method for an intelligent transport system providing an expected arrival time to bus passengers by using dedicated short range communication (DSRC). Page 1, lines 1-8. Independent Claim 1 and dependent Claims (4, 5, 11-14) are presented in this appeal.

Independent Claim 1 recites a method for providing an expected arrival time of bus stops for a traffic information system, which includes an on-board device on each of the buses, a plurality

of roadside base stations, and a bus information server. Page 8, lies 2-5. The roadside base stations (R1-R4) are installed at the side of the roadway between the bus stops (S1-S4). FIG. 1. Each of the roadside base stations receives an on-board device ID from the on-board device of a passing bus, and transmits the pass time of the bus, the on-board device ID, and the roadside station ID to the bus information server. Page 10, lines 2-5. The bus information server computes traffic speed of each section between the roadside base stations based on the received information from the roadside base stations. Page 13, lines 2-7. The bus information server compute an average traffic speed of each section between the roadside base stations using the computed traffic speed of each section. Page 13, lines 7-11.

After computing the average traffic speed of each section, the bus information server computes the time required for arriving at next bus stops from the corresponding roadside base station which the bus just passed. Page 13, lines 12-14. The bus information server transmits the required time for arrival at the bus stops to the corresponding roadside base station. Page 14, lines 1-2. The roadside base station transmits the expected arrival time for each bus stop and the time required for arriving at each bus top to the on-board device when the roadside base station receives the on-board device ID. Page 14, lines 6-14. The on-board device of the bus announces the arrival time of each bus stop and the time required for arrival by displaying the received information on a display device. Page 14, lines 15-19.

Claim 2 recites that the bus information server, the roadside base station and the on-board device determine a bus course based on an on-board device group ID. Page 17, lines 13-20.

Claim 5 recites that the bus stops are major bus stops. Page 14, lines 1-2.

Claim 11 recites that the bus information server stores the computed traffic speed of each section to a section speed_DB. Page 13, lines 7-11.

Claim 12 recites that the bus information server updates the average traffic speed of each section based on the computed traffic speed of each section previously stored in the section speed_DB. Page 13, lines 7-11.

Claim 13 recites that the bus information server reads a bus stop_DB stored in the bus information server as a form of a table containing a bus stop list according to bus courses passing the roadside base station. Page 13, lines 11-16. The bus information server computes the time required for arriving at each of the bus stops based on the table of the bus stop_DB. Page 13, lines 20-23. The computed time for arriving at each of the bus stops is stored in a requirement time_DB as a form of a table. FIG. 4, Page 13, lines 2-7.

Claim 14 recites that the bus information server transmits the table of the requirement time_DB and an on-board device group ID to the corresponding roadside base station. Page 13, line 27- page 14, lines 1-5.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The issue involved in this Appeal is as follows:

A. Are Claims 1, 4, 5, 11, and 12 unpatentable under 35 U.S.C. §103(a) for being obvious over U.S. Patent No. 5,739,774 issued to Olandesi ("Olandesi") in view of U.S. Patent No. 6,006,159 issued to Schmier et al ("Schmier") and further in view of Japanese Patent No. JP354082584 issued to Fujimoto ("Fujimoto")?

B. Are Claims 13 and 14 unpatentable under 35 U.S.C. §103(a) for being obvious over Olandesi in view of Schmier further in view of Fujimoto and further in view of U.S. Patent No. 6,803,862 issued to O'Connor et al ("O'Connor")?

VII. ARGUMENT

The Examiner has rejected Claims 1, 4, 5, 11, and 12 as unpatentable under 35 U.S.C. §103(a) over Olandesi in view of Schmier and further in view of Fujimoto.

The Examiner has rejected Claims 13 and 14 as unpatentable under 35 U.S.C. §103(a) over Olandesi in view of Schmier and further in view of Fujimoto and further in view of O'Connor.

All of the claims do not stand or fall together. The basis for the separate patentability of the claims is set forth below.

A. Overview of the Prior Art

1. Overview of Olandesi

Olandesi teaches a mass transit monitoring and control system including a plurality of stop units, a plurality of vehicle units, and computing means. Abstract. The stop units are installed at passenger drop-off and pickup stops to collect and disseminate information related to vehicle arrivals at the passenger stops. Abstract. Computing means determines the status and timeliness of the vehicles. Abstract. Computing means transmits information to the stop units, the information including the arrival times of vehicles at the respective stop, schedule adjustment for the vehicles, vehicle IDs, and the like. Col. 8, lines 32-26. The stop units disseminate the information to individuals waiting to be transported from the respective stop. Col. 6, lines 59-60.
The stop units also disseminate the information to the passengers being transported on the vehicles units. Col. 10, lines 23-24.

Olandesi does not teach or suggest using traffic information including the on-board device ID, a roadside base station ID, and a pass time to compute a traffic speed of each section between the roadside base station, and to compute an average speed based on the computed traffic speed. Olandesi also does not mention the roadside base stations are installed between the bus stops. Nor does Olandesi mention the announcing of the expected arrival time of each of the next bus stops at the on-board device.

2. Overview of Schmier

Schmier discloses a system for notifying passengers waiting for public transportation vehicles of the status of the vehicles. Abstract. Specifically, Schmier discloses a central processor computing a transit data table that contains estimated times for arrival at all of the stops along a given vehicle's route. Col. 4, lines 21-38. The computation of the transit data is based on the vehicle's location obtained by a global positioning system device in the vehicle. Col. 3, lines30-34 and Col. 4, lines 5-10. Thus, Schmier fails to teach or suggest computing the arrival time based on the computed traffic speed and the computed average traffic speed. Schmier also fails to mention the roadside base stations are installed between the bus stops.

3. Overview of Fujimoto

Fujimoto mentions using an average passing speed of a bus to compute the arrival time. Abstract. Fujimoto's disclosure (in Japanese) mentions that the average passing speed is computed as the distance between two ground receivers divided by the difference in time that a bus passes the two ground receivers. Equation 5. Fujimoto fails to teach or suggest computing the arrival time based on the computed traffic speed and the computed average traffic speed.

4. Overview of O'Connor

O'Connor discloses a communication system including a host system located in a central depot. Col. 2, lines 14-15. O'Connor mentions storing bus resource, bus route, bus timetable, and messaging data in a database of the host system. Col. 2, lines 43-46. O'Connor fails to teach or suggest computing the arrival time based on the computed traffic speed and the computed average traffic speed.

B. Rejection of Claims 1, 4, 5, 11, and 12 over Olandesi, Schmier, and FujimotoUnder 35 U.S.C § 103(b)

5. Claim 1

To establish a *prima facie* case for obviousness it must be shown that the cited references teach or suggest each element of the claim. See *In Re Reinhart*, 189 U.S.P.Q. 143, 147 CCPA, 1976 ("'*prima facie*' case of obviousness is established where the teachings from the prior art itself would appear to have suggested the claimed subject matter").

With respect to Claim 1, Olandesi fails to teach or suggest using traffic information including the on-board device ID, a roadside base station ID, and a pass time to compute a traffic speed of each section between the roadside base station, and to compute an average traffic speed based on the computed traffic speed. Olandesi also does not mention the roadside base stations are installed between the bus stops. Nor does Olandesi mention the announcing of the expected arrival time of each of the next bus stops at the on-board device.

Recognizing Olandesi's failure to disclose the bus information server that computes a traffic speed and an average traffic speed of each section, the Examiner cites Fujimoto to supply the teaching. The Examiner relies on the Constitution of Fujimoto to characterize the disclosed "average passing speed" as an average speed of "the speed of buses passing ground receivers along the bus route." Page 4, second paragraph of the Office Action. The rest of the Fujimoto's disclosure is in Japanese and is not relied on by the Examiner. The Examiner's characterization may be deemed as a reasonable literal definition of the "average passing speed." However, this definition is not supported by the disclosure of Fujimoto. In the Constitution, Fujimoto simply discloses obtaining the "average passing speed" of a bus based on the information available from the ground receivers, and obtaining the bus arrival time at the set station located in front of the bus using the output of the ground receivers. Fujimoto does not disclose how the average passing speed is obtained and sheds no light on how the passing speed is obtained (e.g., measured or computed). Without specific disclosure, there is no way of knowing whether the average passing speed is an average of the speed of buses passing certain

ground points as asserted by the Examiner, or it is the average speed for a bus to pass the distance between two ground points. Without support from Fujimoto's disclosure, the Examiner's assertion is merely conjecture.

Applying similar reasoning to the elements of Claim 1, Appellant submits that Fujimoto does not provide any teaching or suggestion to the "average traffic speed" of Claim 1. The recited average traffic speed is based on the computed traffic speed, which in turn is based on the on-board device ID, a roadside base station ID and a pass time (the time a bus passing a roadside base station). Fujimoto does not disclose that the average passing speed is computed in a two-step process as recited in steps (c) and (d) of Claim 1; namely, computing a computed traffic speed first, and computing an average traffic speed next. Fujimoto's disclosure of obtaining the "average passing speed of a bus based on the information available from the ground receivers" does not teach or suggest the separate steps of (c) and (d) recited in Claim 1.

Moreover, Fujimoto does not mention or suggest that the ground receivers compute a passing speed of the buses. Thus, assuming for the sake of argument that Fujimoto's average passing speed corresponds to the claimed average traffic speed, there is nothing in Fujimoto that teaches or suggests the claimed "computed traffic speed."

As there is nothing in Fujimoto that discloses the computation of the "average traffic speed" using the computed traffic speed, Fujimoto does not cure the defect of Olandesi.

Additionally, neither Olandesi nor Fujimoto teaches or suggests the roadside base stations "installed at side of roadway between the bus stops." As explicitly recited in Claim 1, a bus does not stop when it exchanges information with one of the roadside base stations. In contrast, Olandesi teaches that stop units, characterized by the Examiner as the roadside base stations, are installed at each of the passenger drop-off and pickup stops (col. 6, lines 24-26) for the purpose of displaying bus information to the people waiting to get on the bus. Thus, Olandesi's cannot be modified to produce the claimed roadside base station installed between the bus stops. Fujimoto also does not teach or suggest the specific locations of the ground

receivers. Thus, neither Olandesi nor Fujimoto teaches or suggests the roadside base stations as claimed.

The Examiner also recognizes that Olandesi fails to teach the on-board device announcing the expected arrival time of each of the next bus stops, but cites Schmier to supply the teaching. However, Schmier does not cure the defect of Olandesi. Schmier is silent on using the computed traffic speed to compute the average traffic speed. Schmier is also silent on using any roadside base stations between bus stops. Rather, Schmier teaches that the information of a vehicle is sent directly from the vehicle to a central computer without going through a roadside base station (col. 3, lines 54-57). Thus, Olandesi in view of Schmier and further in view of Fujimoto does not teach or suggest each of the elements of Claim 1.

Accordingly, Appellant respectfully submits Claim 1 is separately patentable over Olandesi in view of Schmier and further in view of Fujimoto and requests the rejection of Claim 1 under 35 USC §103 be overturned.

6. Claims 4 and 5

In regard to Claims 4 and 5, Claims 4 and 5 depend from Claim 1 and incorporate the limitations thereof. Thus, for at least the reasons discussed above with respect to Claim 1, these claims are not obvious over Olandesi in view of Schmier and further in view of Fujimoto.

Claim 4 further includes the elements of "the bus information server, the roadside base station and the on-board device determine a bus course based on an on-board device group ID". None of the cited references discloses the on-board device group ID as claimed. The cited passage of Olandesi only discloses that the vehicle ID, a stop number, and route numbers are exchanged between the stop units and the vehicle, but does not teach or suggest that the bus course is determined by an on-board device group ID. Neither Schmier nor Fujimoto cure this defect of Olandesi. Thus, Olandesi in view of Schmier and Fujimoto does not teach or suggest each and every element of Claim 4 at least for this additional reason.

For the foregoing reasons, Appellant respectfully submits Claims 4 are 5 are separately patentable over Olandesi in view of Schmier and Fujimoto. Accordingly, Appellant respectfully requests that the rejection of Claims 4 and 5 under 35 U.S.C. §103(a) be overturned.

7. Claim 11

In regard to Claim 11, Claim 11 depends from Claim 1 and incorporates the limitations thereof. Thus, for at least the reasons discussed above with respect to Claim 1, this claim is not obvious over Olandesi in view of Schmier and further in view of Fujimoto.

Claim 11 further includes the element of "the bus information server stores the computed traffic speed of each section to a section speed_DB". The Examiner relies on Schmier for disclosing storing the average speed of vehicles between various points. Col. 2, lines 50-56. However, the disclosed "average speed" is patentable distinguishable from the claimed "computed traffic speed of each section," which is based on the on-board device ID, the roadside base station ID, and the pass time. A skilled person would understand the disclosed average speed as the speed of a vehicle under average traffic conditions, absent any suggestion that computation is involved. Thus, Olandesi in view of Schmier and Fujimoto does not teach or suggest each and every element of Claim 11 at least for this additional reason.

For the foregoing reasons, Appellant respectfully submits Claim 11 is separately patentable over Olandesi in view of Schmier and Fujimoto. Accordingly, Appellant respectfully requests that the rejection of Claim 11 under 35 U.S.C. §103(a) be overturned.

8. Claim 12

In regard to Claim 12, Claim 12 depends from Claim 1 and incorporates the limitations thereof. Thus for at least the reasons discussed above with respect to Claim 1, this claim is not obvious over Olandesi in view of Schmier and further in view of Fujimoto.

Claim 12 further includes the element of "the bus information server updating the average traffic speed of each section based on the computed traffic speed of each section previously stored in the section speed_DB". None of the cited references teaches or discloses

an "average traffic speed," which is computed using the computed traffic speed of each section previously stored in the section speed_DB.

The Examiner alleges that limitation recited in Claim 12 is the definition of how to compute the average value of a group of values. Page 7 of Final Office Action. However, this definition does not teach which group of values should be averaged. None of the cited references discloses or suggests the stored computed traffic speed is the group of values being averaged at the bus information server. As previously discussed in regard to Claim 1, Fujimoto does not disclose that the "average passing speed" is obtained by averaging the computed traffic speed. Thus, Olandesi in view of Schmier and Fujimoto does not teach or suggest each and every element of Claim 12 at least for this additional reason.

For the foregoing reasons, Appellant respectfully submits Claim 12 is separately patentable over Olandesi in view of Schmier and Fujimoto. Accordingly, Appellant respectfully requests that the rejection of Claim 12 under 35 U.S.C. §103(a) be overturned.

C. Rejection of Claims 13 and 14 over Olandesi, Schmier, Fujimoto, and O'Connor Under 35 U.S.C § 103(b)

1. Claims 13

In regard to Claim 13, Claim 13 depends from Claim 1 and incorporates the limitations thereof. Thus for at least the reasons discussed above with respect to Claim 1, this claim is not obvious over Olandesi in view of Schmier and further in view of Fujimoto.

O'Connor also does not teach or suggest the average traffic speed based on the computed traffic speed as recited in Claim 1, from which Claim 13 depends. The Examiner has not identified and Appellant has been unable to locate any reference to this claimed limitation in O'Connor. Thus, Claim 1 and its dependent claims are not obvious over Olandesi in view of Schmier further in view of Fujimoto and further in view of O'Connor.

Moreover, Claim 13 recites the elements of "reading a bus stop_DB stored in the bus information server as a form of a table containing a bus stop list according to bus courses passing

the roadside base station; computing the time required for arriving at each of the bus stops based on the table of the bus stop_DB; and storing the computed time for arriving at each of the bus stops in a requirement time_DB as a form of a table." The Examiner relies on O'Connor for disclosing the stored information in the bus information server. However, O'Connor merely mentions the existence of a database storing bus resource, bus route, bus timetable, and messaging data. Col. 3, lines 44-46. The stored information is static; that is, the stored information does not reflect any changes in the bus schedule. O'Connor does not disclose using the stored information for computation purposes, or storing the computed time into the database. O'Connor does not teach or suggest using a bus stop_DB to compute the time required for arriving at each of the bus stops, or storing the computed time into a requirement time_DB as a form of a table. Thus, Olandesi in view of Schmier, Fujimoto, and O'Connor does not teach or suggest each and every element of Claim 13 at least for this additional reason.

For the foregoing reasons, Appellant respectfully submits Claim 13 is separately patentable over Olandesi in view of Schmier, Fujimoto, and O'Connor. Accordingly, Appellant respectfully requests that the rejection of Claim 12 under 35 U.S.C. §103(a) be overturned.

2. Claims 14

In regard to Claim 14, Claim 14 depends from Claim 13 and incorporates the limitations thereof. Thus for at least the reasons discussed above with respect to Claim 13, this claim is not obvious over Olandesi in view of Schmier further in view of Fujimoto and further in view of O'Connor.

Moreover, Claim 14 recites the elements of "the bus information server transmitting the table of the requirement time_DB and an on-board device group ID to the corresponding roadside base station". The Examiner relies on Olandesi for disclosing a central server transmitting the system timeliness status to the stop units to be transferred to the vehicle units. Col. 2, lines 24-32. However, a skilled person would understand the "system timeliness status" as meaning whether the bus is on time or delayed, and the amount of delay. The mere reference to the "system timeliness status" does not teach or suggest the "table of the requirement time_DB" and the "on-

board device group ID" as claimed. Thus, Olandesi in view of Schmier, Fujimoto, and O'Connor does not teach or suggest each and every element of Claim 14 at least for this additional reason.

For the foregoing reasons, Appellant respectfully submits Claim 14 is separately patentable over Olandesi in view of Schmier, Fujimoto, and O'Connor. Accordingly, Appellant respectfully requests that the rejection of Claim 12 under 35 U.S.C. §103(a) be overturned.

VIII. CONCLUSION AND RELIEF

Accordingly, it is submitted that the rejections of Claims 1, 4, 5, and 11-14 based on 35 U.S.C. §103 be overturned.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

Dated: November 28, 2005

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CERTIFICATE OF MAILING:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Virginia, VA 22313-1450.

Erin Flynn November 28, 2005

IX. CLAIMS APPENDIX

The claims involved in this Appeal are as follows:

1. (Previously Amended) A method for providing an expected arrival time of bus stops for a traffic information system, wherein the traffic information system includes an on-board device, a plurality of roadside base stations and a bus information server, the method comprising the steps of:

a) at one of the roadside base stations which are installed at side of roadway between the bus stops, receiving an on-board device ID from the on-board device in a bus, when the bus equipping the on-board device passes the roadside base station without stopping;

b) at the roadside base station, transmitting traffic information including the on-board device ID, a roadside base station ID and a pass time to the bus information server;

c) at the bus information server, computing a traffic speed of each section between the roadside base stations using the traffic information;

d) at the bus information server, computing an average traffic speed of each section between the roadside base stations using the computed traffic speed of each section;

e) at the bus information server, computing time required for arriving at next bus stops from the roadside base station based on the computed average traffic speed of each section;

f) at the bus information server, transmitting the computed time required for arriving at each of the next bus stops from the corresponding roadside base station;

g) at the roadside base station, transmitting the computed time required for arriving at each of the next bus stops to the on-board device when the roadside base station receives the on-board device ID; and

h) at the on-board device, announcing the expected arrival time of each of the next bus stops based on the computed time required for arriving through an output device.

2-3. (Canceled)

4. (Previously Presented) The method as recited in the claim 1, wherein the bus information server, the roadside base station and the on-board device determine a bus course based on an on-board device group ID.

5. (Previously Presented) The method as recited in the claim 1, wherein the bus stops are major bus stops.

6-10. (Canceled)

11. (New) The method as recited in claim 1, wherein in the step c), the bus information server stores the computed traffic speed of each section to a section speed_DB.

12. (New) The method as recited in claim 11, wherein in the step d), the bus information server updates the average traffic speed of each section based on the computed traffic speed of each section previously stored in the section speed_DB.

13. (New) The method as recited in claim 12, wherein the step e) includes the steps of:

e1) reading a bus stop_DB stored in the bus information server as a form of a table containing a bus stop list according to bus courses passing the roadside base station;

e2) computing the time required for arriving at each of the bus stops based on the table of the bus stop_DB; and

e3) storing the computed time for arriving at each of the bus stops in a requirement time_DB as a form of a table.

14. (New) The method as recited in claim 13, wherein in the step f), the bus information server transmits the table of the requirement time_DB and an on-board device group ID to the corresponding roadside base station.

X. EVIDENCE APPENDIX

No evidence is submitted with this appeal.

XI. RELATED PROCEEDINGS INDEX

No related proceedings exist.